

Mail Stop Appeal Brief  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

January 9, 2006

Harold C. Moore

1252

Signature

January 9, 2006

Date of Signature

Re: Application of: Soemo et al.  
Serial No.: 09/966,738  
Filed: September 28, 2001  
For: A Proprietary Protocol for a System  
Controller for Controlling Device  
Controllers on a Network Having an Open  
Communication Protocol  
Group Art Unit: 2142  
Examiner: Cheryl M. Reid  
Our Docket No.: 1867-0084  
Siemens Docket No.: 2001P18038US

Please find for filing in connection with the above patent application the following documents:

1. Original of the Appeal Brief;
2. Check in the amount of \$500.00; and
5. One (1) return post card.

Commissioner for Patents

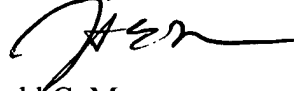
January 9, 2006

Page 2

Enclosed please find a check in the amount of \$500.00 to cover the filing fee of a Brief on Appeal as required by 37 C.F.R. § 1.17(c). Please charge any deficiency, or credit any overpayment to Deposit Account No. 13-0014.

Respectfully Submitted,

MAGINOT, MOORE & BECK, LLP

A handwritten signature in black ink, appearing to read "H. Moore", is written over the firm name.

Harold C. Moore

Registration No. 37,892

Chase Tower

111 Monument Circle, Suite 3250

Indianapolis, IN 46204-5115

January 9, 2006

Enclosures



1867-0084  
2001P18038US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited  
with the United States Postal Service with sufficient postage as  
first class mail in an envelope addressed to: Mail Stop Appeal  
Brief-Patents, Commissioner for Patents, P.O. Box 1450,  
Alexandria, VA 22313-1450 on January 9, 2006

(Date of Deposit)

Harold C. Moore

Name of person mailing Document or Fee

Signature

January 9, 2006

Date of Signature

Re:           Application of:       Soemo et al.  
              Serial No.:     09/967,738  
              Filed:         September 28, 2001  
              For:           A Proprietary Protocol for a System Controller  
                              for Controlling Device Controllers on a Network  
                              Having an Open Communication Protocol  
              Group Art Unit:   2142  
              Examiner:       Cheryl M. Reid  
              Our Docket No.:   1867-0084  
              Siemens Docket No.: 2001P18038US

**BRIEF ON APPEAL**

Sir:

This is an appeal under 37 CFR § 41.31 to the Board of Patent Appeals and  
Interferences of the United States Patent and Trademark Office from the final rejection of  
claims 1-41 of the above-identified patent application. Claims 1-13, 15-39 and 47-51 were  
rejected in the Final Office Action dated August 9, 2005. A check in the amount of

**\$500.00** is enclosed herewith to cover the fee required under 37 CFR § 41.20(b)(2). Also,

01/12/2006 EAREGAY1 00000052 09966738

01 FC:1402

500.00 DP

please provide any extension of time which may be necessary and charge any fees which may be due to Deposit Account No. 13-0014, but not to include any payment of issue fees.

**(1) REAL PARTY IN INTEREST**

Siemens Building Technologies, Inc. is the owner of this patent application, and therefore the real party in interest.

**(2) RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences in this case.

**(3) STATUS OF CLAIMS**

Claims 1-13, 15-39 and 47-53 are pending in the application.

Claims 1-13, 15-39 and 47-51 stand rejected and form the subject matter of this appeal. Claims 1-13, 15-39 and 47-53 are shown in the Appendix attached to this Appeal Brief.

**(4) STATUS OF AMENDMENTS**

Applicants filed a Response to Office Action dated May 16, 2005 ("Response") responsive to an Office Action dated January 14, 2005 (First Office Action). A Final Office Action dated August 9, 2005 was designated by the Examiner to be responsive to the Response.

## **(5) SUMMARY OF THE CLAIMED SUBJECT MATTER**

Claim 1 is directed to a proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network. As shown in Figs. 1 and 2 of the Application, an exemplary embodiment of the invention of claim 1 includes a system controller that includes an application controller in the form of NPRA 104, a plurality of applications in the form of applications 102, and a plurality of device controllers 112 and 116. (See Specification at p.5, line 28 to p.6, line 17; see also *id.* at p.8, lines 11-16). The Specification discusses system points SPs, which map to system variables as SVs. (Specification at p.6, lines 30-33; p.7, lines 1-3; page 8, lines 3-10).

Referring again generally to claim 1, the proprietary communication protocol includes a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point. In the embodiment described in the Specification, the applications 102 send messages to the NPRA 104 requesting various operations on system points or SPs. (See *id.* at p.8, line 11-16; see also p.14, lines 25-27; p.15, lines 14-15). As claimed, the predefined messages include messages for reporting to the application in response to the instruction. (See e.g. *id.* at p.18, lines 13-15 and lines 21-23). The plurality of messages includes a discover message transmitted by the applications to the application controller for inquiring whether a select system point is stored in a database of the application controller. (See e.g., *id.* at p.12, lines 19-21).

The proprietary protocol includes a message identification field and a protocol identification field. (See, e.g., *id.* at Fig. 5, elements 162 and 164).

Claim 47 is directed to a proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network. As shown in Figs. 1 and 2 of the Application, an exemplary embodiment of the invention of claim 1 includes a system controller that includes an application controller in the form of NPRA 104, a plurality of applications in the form of applications 102, and a plurality of device controllers 112 and 116. (See Specification at p.5, line 28 to p.6, line 17; see also *id.* at p.8, lines 11-16).

Referring again generally to claim 47, the proprietary communication protocol includes a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point. In the embodiment described in the Specification, the applications or clients 102 send messages to the NPRA 104 requesting various operations on system points or SPs. (See *id.* at p.8, line 11-16; see also p.14, lines 25-27; p.15, lines 14-15). As claimed, the predefined messages include messages for reporting to the application in response to the instruction. (See e.g. *id.* at p.18, lines 13-15 and lines 21-23).

The proprietary protocol includes a message identification field and a protocol identification field. (See, e.g., *id.* at Fig. 5, elements 162 and 164; p.9, lines 15-16). The protocol also includes a field for indicating at least one element value of the select system point. (See *id.* at Fig. 5, element 174; p.10, lines 38-32). The protocol further includes a

field for determining a format for displaying said element values. (See *id.* at Fig. 5, element 176; p.11, lines 1-6).

## **(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 1-5, 8, 10-13, 15-16, 18-22, 25, 27-34, 36-39 and 47-51 are unpatentable under 35 U.S.C. §102(e) over U.S. Patent No. 6,763,040 to Hite (hereinafter “Hite”).

Whether claims 9 and 17 are unpatentable under 35 U.S.C. §103(a) over Hite.

Whether claims 6-7 are unpatentable under 35 U.S.C. §103(a) over Hite in view of U.S. Patent Publication No. 2002/0174240 A1 to Nason et al (hereinafter “Nason”).

Whether claims 23-24, 26 and 35 are unpatentable under 35 U.S.C. §103(a) obvious over Hite in view of U.S. Patent No. 6,775,692 to Albert et al. (hereinafter “Albert”).

## **(7) ARGUMENT**

### **I. Hite Does Not Anticipate Claim 1**

In the August 9, 2005 Final Office Action, the Examiner rejected claim 1 as allegedly being anticipated by Hite. As will be discussed below in detail, Hite does not teach, show or suggest each and every element of claim 1. As a consequence, it is respectfully submitted that the anticipation rejection of claim 1 should be reversed.

#### **A. Hite**

Hite teaches a system in which a control area network, which uses a proprietary protocol, may be controlled and/or monitored via the Internet using standard Web

interfaces. These systems are shown in Fig. 8 of Hite. Fig. 1 of Hite also shows a standard web browser 23, 24 that interfaces to a control area network via the Internet and a control network portal 12. This configuration allows for user access to control information using standard Internet web browsers, which use standard protocols. (Col. 4, lines 1-44).

In contrast to the standard web protocols, the control network portal 12 uses a *proprietary protocol* to communicate with the control area network 34. Fig. 3 shows the portal 12 as including a web server 13 having standard CGI and ASP functionalities, and an Internet Appliance server 14 (or 320 of Fig. 3) that performs the protocol conversion to the proprietary protocol. (See Hite at col. 6, lines 1-8 and col. 9, lines 39-43). It is the control area networks, and not the Internet Web Browsers, that use the control network message protocol of columns 12-51. (*Id.* at col. 9, line 51 to col. 11, line 49).

The proprietary protocol defines a packet having a protocol field, a length of data field, a data field, and a checksum. The protocol field indicates the type of protocol. The length of data field lists the length, in bytes, of the data field. The data field contains the sub protocol data and the checksum determines the integrity of the packet. (Hite at Abstract).

B. Hite Does Not Teach a Discover Message as Claimed

Hite fails to teach, show or suggest “a discover message transmitted from the applications to the application controller for inquiring whether the select system point is stored in a database of the application controller”, as recited in claim 1. The Examiner has failed to allege a prima facie case of anticipation because the Examiner identifies no portion of Hite that discusses a message that inquires whether a system point is stored in an



application controller.

As claimed, “system points” are elements that correspond to data variables in the network. Nonlimiting examples of system points provided in the specification include a room temperature, a room temperature set point, or the like. (Specification at p.8).

1. The Examiner’s Rejection

In the rejection of claim 1, the Examiner asserted that the claimed discover message was taught in two places of Hite. In particular, the Examiner alleged that Hite disclosed:

plurality of messages include a discover message transmitted from the applications to the application controller for inquiring whether the select system point is stored in a database of the application controller (Col 3, lines 55-58, Col 9, lines 25-41).

(Final Office Action at p.3).

Applicants submit that the above-cited portions of Hite do not teach or suggest a discover message that inquires as to whether an element corresponding to a data variable, *i.e.* a system point, is stored in *any* database, much less the database of the application controller. The portions of Hite cited by the Examiner as teaching the claimed discover message are set forth below:

. . . Content providers 25 and 26 are typically web servers that generate and provide static and/or dynamic information and content in the form of web pages. Content provider applications executing on the web server are able to mine data stored in databases (not shown). The web pages . . .

(Hite at col. 3, lines 55-58)

Databases 314 are operable to store information that can be used by web servers 312 to provide content that may be required by a control area network device 326. This can include information such as CD lists, television listings, sports data, stock information or any other type of information that may be used by control access network device 326.

(Hite at col. 9, lines 25-31).

The above quoted portions of Hite do not teach a discover message in which an application inquires as to whether a particular point is stored in the database of an

application controller. In fact, the above quoted portions of Hite do not teach *any* message that inquires as to whether a particular point is stored in *any* database. Instead, these portions of Hite merely teach that database information may be formulated into a web page and then provided to another application. There is no indication that the application requesting the information generates an inquiry regarding whether or not a specified system point is stored.

Thus, the Examiner has failed to set forth a prima facie case of anticipation. The Examiner has incorrectly contended that formulating web pages using system data, as disclosed in Hite, constitutes a teaching of “a discover message transmitted from the applications to the application controller for inquiring whether the select system point is stored in a database of the application controller”, as claimed. Formulating web pages does not require a “discover” message either inherently or expressly.

For at least this reason, the rejection of claim 1 as anticipated by Hite should be reversed.

II. Claims 2-5, 8, 10-13, 15-16, 18-22, 25, 27-34 and 36-39

Claims 2-5, 8, 10-13, 15-16, 18-22, 25, 27-34 and 36-39 also stand rejected as allegedly being unpatentable over Hite. Claims 2-5, 8, 10-13, 15-16, 18-22, 25, 27-34 and 36-39 all depend from and incorporate all of the limitations of claim 1. Accordingly, for at least the same reasons as those set forth above in connection with claim 1, it is respectfully submitted that the anticipation rejections of claims 2-5, 8, 10-13, 15-16, 18-22, 25, 27-34 and 36-39 should be reversed.

A. The Rejection of Claims 3-5 Should be Reversed for Additional Reasons.

The rejection of claim 3 should be reversed for additional reasons. Claim 3 includes a limitation directed to the protocol including a “system point identification field” for identifying the select system point. As discussed above, a system point is an element that corresponds to a network variable. A variable, as is known in the art, is something that changes.

In the rejection of claim 3, the Examiner cites col. 4, lines 10-20 of Hite as teaching a system point identification field. (Final Office Action at p.4, cited the First Office Action at p.3). Column 4, lines 10-20 of Hite teach the use of an URL request for a web page. A URL request does not identify a system point. A URL merely constitutes an address of a database, not an identification of network variable.

Moreover, a URL request is not part of a “proprietary protocol”. URL requests constitute a part of the standard, open source World Wide Web command, *as clearly taught by Hite* at col. 4, lines 1-38. Thus, the URL request of Hite cannot constitute a system point identification field of a *proprietary* communication protocol. While Hite appears to teach a proprietary protocol at cols. 12-51, that proprietary protocol does not include a URL request generated by an application and sent to a web server, as taught by Hite at col. 4, lines 1-38.

It is therefore respectfully submitted that the Examiner has failed to make out a prima facie case of anticipation. Accordingly, for reasons independent of those discussed above in connection with claim 1, it is respectfully submitted that the anticipation rejection of claim 3 should be reversed.

Claims 4 and 5 depend from claim 3. Accordingly, the rejections of claim 4 and 5

over Hite should be reversed for at least all the reasons set forth above in connection with claim 3.

**B. The Rejection of Claim 11 Should be Reversed for Additional Reasons.**

The rejection of claim 11 should be reversed for additional reasons. Claim 11 includes a limitation directed to the protocol including a “field for determining a format for displaying the element values [of a select system point]”.

In the rejection of claim 11, the Examiner cites col. 15 of Hite as teaching message field determining a format for displaying element values of a system point. (Final Office Action at p.4, cited the First Office Action at p.5). The word “display”, however, is not mentioned or implied in column 15 of Hite. Instead, column 15 of Hite lists several messages that define “data formats” for messages. Hite does not disclose that such data formats are in any way related to display.

It is therefore respectfully submitted that the Examiner has failed to make out a prima facie case of anticipation of claim 11. Accordingly, for reasons independent of those discussed above in connection with claim 1, it is respectfully submitted that the anticipation rejection of claim 11 should be reversed.

**C. The Rejection of Claim 29 Should be Reversed for Additional Reasons.**

The rejection of claim 29 should be reversed for additional reasons. Claim 29 includes a limitation directed to the protocol including a “message transmitted . . . for canceling a previously transmitted message”.

In the rejection of claim 29, the Examiner cites col. 43, lines 34-45 of Hite. (Final

Office Action at p.4, cited the First Office Action at p.8). This portion of Hite discusses commands that add and delete IP addresses from an IP address list. In other words, a command “Add IP Address” may be used to add an IP address to a list of IP addresses, and a command “Delete IP Address” may be used to remove an IP address. A message that causes a piece of data to be deleted from a database list, such as an IP address list, does not constitute a “message . . . canceling a previously transmitted message”. Deleting a piece of data does not relate to or identify any particular prior message.

Without more, it would appear that the Delete IP Address message does not intercept, cancel, or even refer to a prior message of any type. (See Hite at col. 43, lines 42-44).

It is therefore respectfully submitted that the Examiner has failed to make out a prima facie case of anticipation. Accordingly, for reasons independent of those discussed above in connection with claim 1, it is respectfully submitted that the anticipation rejection of claim 29 should be reversed.

### III. Claims 6 and 7

Claims 6 and 7 stand rejected as allegedly being unpatentable over Hite in view of Nason. Claims 6 and 7 depend from and incorporate all of the limitations of claim 1. The modification of Hite proposed by the Examiner in connection with the rejection of claims 6 and 7 does not overcome the deficiencies of Hite with respect to claim 1. Accordingly, for at least the same reasons as those set forth above in connection with claim 1, it is respectfully submitted that the anticipation rejections of claims 6 and 7 should be reversed.

A. The Rejection of Claims 6 and 7 Should be Reversed for Other Reasons

The rejection of claims 6 and 7 should be reversed for additional reasons. Claim 6 (from which claim 7 depends) includes a limitation directed to the protocol including a “priority field for determining whether data relating to the select system point can be written to”. In other words, the priority field determines whether a data value may be written to.

In the rejection of claim 6, the Examiner admits that Hite fails to teach a priority field. (Final Office Action at p.4 citing First Office Action at p.13). To overcome this admitted deficiency, the Examiner alleges that Nason teaches a priority field, and cites Nason paragraph [0099] as providing that teaching. Paragraph [0099] of Nason is set forth below:

22 sysToken: 4 bytes, unsigned long integer, System defined "token" that must be passed back with the corresponding Close Transmit Stream Request. sysStrmID: 4 bytes, unsigned long integer, System provided stream ID. This field denotes the B channel the connection should assume. strmCodec 4 bytes, unsigned long integer (bitmap), System selected CODEC to use, Multiple CODECs may be logically Ored into this field. strmFrameSizeInMS 4 bytes, unsigned long integer, Preferred CODEC frame size for the TX stream (in milliseconds) destStrmIpAddress: structure ip\_addr 4 bytes, unsigned long integer, The IP address of the device to transmit to. ip\_port 2 bytes, unsigned short integer, port number used by the device that will be transmitting to the phone. Note that due to long word alignment, there may be two bytes of filler following this field. qosLevel 4 bytes, unsigned long integer, QoS level requested. If 0.times.ffffff, then no 802.1Q tag, else if 0-7, assume 802.1Q tag and set priority field to the qosLevel noSilence 4 bytes, unsigned long integer noSilence = 0: disable silence suppression on the Tx stream noSilence = 1: enable silence suppression on the Tx stream

As best understood, it appears that Nason teaches the use of priority levels for determining the *order in which packets are to be processed*. To this end, it is noted that Nason relates to “Internet Protocol (IP) telephony, and more particularly to a method of controlling IP telephones within a LAN-implemented or Ethernet PBX using a specialized messaging protocol”. (Nason at paragraph [0001]). The requirement of prioritizing packets to preserve sound quality in IP telephony is known in the art.

However, prioritization in this manner is not claimed. Instead, claim 6 is directed to a “priority field *for determinining whether data relating to the select system point can be written to*”, as claimed. The claimed priority field does not relate to packet “throughput”, as does the priority value of Nason. Nason does not teach or suggest priority used for the purpose of determining whether a data value may be written to.

Accordingly, even if Hite were modified with Nason as proposed, the resulting combination would fail to arrive at a protocol having a “priority field for determining whether data relating to the select system point can be written to”, as claimed in claims 6 and 7.

It is therefore respectfully submitted that the Examiner has failed to make out a prima facie case of obviousness. Accordingly, for reasons independent of those discussed above in connection with claim 1, it is respectfully submitted that the obviousness rejection of claims 6 and 7 should be reversed.

#### IV. Claims 23, 24, 26 and 35

Claims 23, 24, 26 and 35 all stand rejected as allegedly being unpatentable over Hite in view of Albert. Claims 23, 24, 26 and 35 depend from and incorporate all of the limitations of claim 1. The modification of Hite proposed by the Examiner in connection with the rejection of claims 23, 24, 26 and 35 does not overcome the deficiencies of Hite with respect to claim 1. Accordingly, for at least the same reasons as those set forth above in connection with claim 1, it is respectfully submitted that the anticipation rejections of claims 23, 24, 26 and 35 should be reversed.

V. Claims 9 and 17

Claims 9 and 17 stand rejected as allegedly being unpatentably obvious over Hite. Claims 9 and 17 depend from and incorporate all of the limitations of claim 1. The modification of Hite proposed by the Examiner in connection with the rejection of claims 9 and 17 does not overcome the deficiencies of Hite with respect to claim 1. Accordingly, for at least the same reasons as those set forth above in connection with claim 1, it is respectfully submitted that the anticipation rejections of claims 9 and 17 should be reversed.

VI. Hite Does Not Anticipate Claim 47

In the August 9, 2005 Final Office Action, the Examiner rejected claim 47 as allegedly being anticipated by Hite. As will be discussed below in detail, Hite does not teach, show or suggest each and every element of claim 47. As a consequence, it is respectfully submitted that the anticipation rejection of claim 47 should be reversed.

B. Hite Does Not Teach a Field Determining a Display Format as Claimed

Hite fails to teach, show or suggest a “proprietary communication protocol comprising . . . a field for determining a format for displaying . . . element values”, as recited in claim 47. The Examiner has failed to allege a prima facie case of anticipation because the Examiner identifies no portion of Hite that discusses a message of a proprietary communication protocol that has a field relating to display formats for data.



1. The Examiner's Rejection

In the rejection of claim 47, the Examiner asserted that the claimed display format field was taught in two places of Hite. In particular, the Examiner alleged that Hite disclosed:

a field for determining a format for displaying said element values (Col 4, lines 24-27, Col 22, lines 13-23).

(Final Office Action at p.4).

Applicants submit that the above-cited portions of Hite do not teach or suggest a proprietary communication protocol having a field for determining a display format. The portions of Hite cited by the Examiner as teaching the claimed display format field:

... The web server receives the request and sends a web page file to the web browser, which decodes the file to display information specified format on the screen. Web pages with dynamic content provided by gateway interfaces such as CGI and ISAPI are executable applications. . . (Hite at col. 4, lines 24-27)

The String message is generated by the master to communicate a String. The format of a String is similar to a "C Language" string, however, the semantics are different. A String in a control system context is used to generate a "control" message. The "control" message could cause a laser disc player to begin playing a disc, display a message to the user of the system, or any number of other uses. The string will be converted, as necessary, to any format that the device supports as determined by the StringSize message. (Hite at col. 22, lines 13-23).

The above quoted portions of Hite do not teach a display format field in a message in a proprietary communication protocol. In particular, the first paragraph describes displaying information from a web page, which uses standard, open protocol files. As discussed further above, Hite discloses a system that includes both an open protocol web browser and a proprietary protocol control area network. The first paragraph cited by the Examiner relates to the open protocol web browser and web pages. The formatting of web pages in Hite does not involve using messages of the proprietary protocol that define the display format. Instead, Hite appears to use predefined formats and/or standard open protocol formatting. In any event, mere display of data on a web page does not imply that a

proprietary protocol message must include a display format field.

The second paragraph cited by the Examiner describes a String command of Hite. Hite teaches that the “String” of the String command has a formatted length. However, Hite does not teach that the String command may be displayed, formatted or otherwise. Hite only teaches that the String command may be used to cause a message to be displayed. Hite does not suggest that the displayed message is the String command itself.

Thus, the Examiner has failed to set forth a prima facie case of anticipation. For at least this reason, the rejection of claim 47 as anticipated by Hite should be reversed.

VI. Claims 48-51

Claims 48-51 also stand rejected as allegedly being unpatentable over Hite. Claims 48-51 all depend from and incorporate all of the limitations of claim 47. Accordingly, for at least the same reasons as those set forth above in connection with claim 47, it is respectfully submitted that the anticipation rejections of claims 47-51 should be reversed.

The rejection of claims 49-51 should also be reversed for the additional reasons set forth above in connection with claims 3-5.

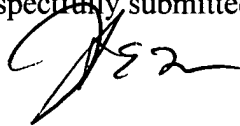
VII. Claims 52-53

Claims 52-53 have not been rejected. They do not appear to have been examined, although they include limitations similar to claim 6. Claims 52-53 are allowable for the reasons discussed above in connection with claim 47, and furthermore for reasons similar to those set forth above in connection with claim 6.

**(8) CONCLUSION**

For all of the foregoing reasons, claims 1-5, 8, 10-13, 15-16, 18-22, 25, 27-34, 36-39 and 47-51 are not anticipated under 35 U.S.C. § 102(e), and claims 6, 7, 9, 17, 23, 24, 26 and 35 are not unpatentable under 35 U.S.C. §103(a). As a consequence, the Board of Appeals is respectfully requested to reverse the rejection of these claims.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'H. Moore', is written over the typed name.

Harold C. Moore  
Attorney for Applicants  
Attorney Registration No. 37,892  
Maginot Moore & Beck  
Bank One Center Tower  
111 Monument Circle, Suite 3250  
Indianapolis, Indiana 46204-5115  
Telephone: (317) 638-2922

## CLAIM APPENDIX

Claim 1. A proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network, said proprietary communication protocol comprising:

a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point, and for reporting to the applications in response to said instruction, said plurality of messages include a discover message transmitted from the applications to the application controller for inquiring whether the select system point is stored in a database of the application controller;

a message identification field for identifying a select message from said plurality of messages; and,

a protocol identification field for identifying said select message as being transmitted via said proprietary communication protocol.

Claim 2. The proprietary communication protocol as defined in claim 1 wherein said proprietary communication protocol is embedded into a communication protocol of the control network.

Claim 3. The proprietary communication protocol as defined in claim 1 further including a system point identification field for identifying the select system point.

Claim 4. The proprietary communication protocol as defined in claim 3 wherein said system point identification field is a point unique identification (PUID) field for identifying the select system point by a unique identification number that is assigned to the select system point.

Claim 5. The proprietary communication protocol as defined in claim 3 wherein said system point identification field is a name identification field for identifying the select system point by a user-defined name that is assigned to the select system point.

Claim 6. The proprietary communication protocol as defined in claim 1 further including a priority field for determining whether data relating to the select system point can be written to.

Claim 7. The proprietary communication protocol as defined in claim 1 further including a priority field for determining whether data relating to select system point can be overridden.

Claim 8. The proprietary communication protocol as defined in claim 1 further including a transaction identification field for uniquely identifying said select message from the plurality of predefined messages.

Claim 9. The proprietary communication protocol as defined in claim 1 further including a field for indicating whether said select message is a last message being transmitted from the application controller to the applications.

Claim 10. The proprietary communication protocol as defined in claim 1 further including a field for indicating at least one element value of the select system point.

Claim 11. The proprietary communication protocol as defined in claim 10 further including a field for determining a format for displaying said element values.

Claim 12. The proprietary communication protocol as defined in claim 1 further including a notification field for indicating at least one type of changes in the data relating to the select system point for which at least one of the applications desires subscription.

Claim 13. The proprietary communication protocol as defined in claim 12 wherein said changes include a change of value, a change of state and a change of quality relating to the select system point.

Claim 15. The proprietary communication protocol as defined in claim 1 wherein said discover message refers to the select system point via a unique identification number associated with the system point.

Claim 16. The proprietary communication protocol as defined in claim 1 wherein said discover message refers to the select system point via a user-defined name that is assigned to the select system point.

Claim 17. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages include a message transmitted from the application controller to the application in response to said discover message to report that the select system point is stored in said database.

Claim 18. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages include a message transmitted from the applications to the application controller for subscribing for changes in the data relating to the select system point.

Claim 19. The proprietary communication protocol as defined in claim 18 wherein said changes include a change of value, a change of state and a change of quality relating to the select system point.

Claim 20. The proprietary communication protocol as defined in claim 18 wherein said plurality of messages includes a message transmitted from the applications to the application controller for unsubscribing for changes in the data relating to the select system point.

Claim 21. The proprietary communication protocol as defined in claim 18 wherein said plurality of messages include a message transmitted from the application controller to the applications reporting of said changes in the data relating to the select system point in response to said subscription message transmitted from the applications.

Claim 22. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for overriding or writing new values in the data relating to the select system point.

Claim 23. The proprietary communication protocol as defined in claim 22 wherein said overriding and writing message is accepted by the application controller if a priority of an application transmitting said message is greater than or equal to a priority of the data relating to the select system point.

Claim 24. The proprietary communication protocol as defined in claim 23 wherein said plurality of messages includes a message transmitted from the applications to the application controller for releasing said priority of the data relating to the selected system point to allow an application having a lower priority than said priority of the data to override or write new value in the data relating to the select system point.

Claim 25. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for requesting query of the data relating to at least one of the system points for specified information.

Claim 26. The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that have a write or override priority that is greater than or equal to a specified priority level of said query message.

Claim 27. The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that conforms to a specified quality.

Claim 28. The proprietary communication protocol as defined in claim 25 wherein said query message requests a report on all system points that a status of at least one node of the control network.

Claim 29. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for canceling a previously transmitted message.

Claim 30. The proprietary communication protocol as defined in claim 2 wherein said plurality of messages includes a message transmitted from the applications to the application controller for canceling a previously transmitted message.

Claim 31. The proprietary communication protocol as defined in claim 1 wherein said plurality of messages includes a message transmitted from the applications to the application controller for instructing the application controller to query all of the data variables in the network operatively connected to the application controller to determine if any of the data variables have been overridden.

Claim 32. The proprietary communication protocol as defined in claim 1 wherein each of the system points are identified by a unique numeric value.

Claim 33. The proprietary communication protocol as defined in claim 1 wherein the system points are identified by a user-defined name.

Claim 34. The proprietary communication protocol as defined in claim 1 wherein each of the system points include at least one element value.



Claim 35. The proprietary communication protocol as defined in claim 1 wherein the system points have an assigned write priority and an override priority.

Claim 36. The proprietary communication protocol as defined in claim 1 wherein the data relating to the system points are stored in a database of the application controller.

Claim 37. The proprietary communication protocol as defined in claim 36 wherein said database stores user-defined data relating to the system points.

Claim 38. The proprietary communication protocol as defined in claim 37 wherein said database stores a unique identification value of the corresponding data variables in the network.

Claim 39. The proprietary communication protocol as defined in claim 37 wherein said database includes field for storing an address of the corresponding data variables in the network.

Claim 47. A proprietary communication protocol for use in a system controller that includes an application controller and a plurality of applications for controlling a plurality of device controllers on a control network by using data relating to system points that correspond to data variables in the network, said proprietary communication protocol comprising:

- a plurality of predefined messages transmitted between the application controller and the applications for instructing the application controller to perform a function relating to a select system point, and for reporting to the applications in response to said instruction;

- a message identification field for identifying a select message from said plurality of messages;

- a protocol identification field for identifying said select message as being transmitted via said proprietary communication protocol;

- a field for indicating at least one element value of the select system point; and

- a field for determining a format for displaying said element values.

Claim 48. The proprietary communication protocol as defined in claim 47 wherein said proprietary communication protocol is embedded into a communication protocol of the control network.

Claim 49. The proprietary communication protocol as defined in claim 47 further including a system point identification field for identifying the select system point.

Claim 50. The proprietary communication protocol as defined in claim 49 wherein said system point identification field is a point unique identification (PUID) field for identifying the select system point by a unique identification number that is assigned to the select system point.

Claim 51. The proprietary communication protocol as defined in claim 49 wherein said system point identification field is a name identification field for identifying the select system point by a user-defined name that is assigned to the select system point.

Claim 52. The proprietary communication protocol as defined in claim 47 further including a priority field for determining whether data relating to the select system point can be written to.

Claim 53. The proprietary communication protocol as defined in claim 47 further including a priority field for determining whether data relating to select system point can be overridden.